STATEMENT OF BASIS

Vulcraft
Fort Payne, Alabama
DeKalb County
703-0017

This proposed Title V Major Source Operating Permit will be issued under the provisions of ADEM Admin. Code R. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

The only significant sources of air pollutants at this facility are:

Painting

Deck Finishing Operation

Based on the Title V permit application, the only potential major air pollutants at this facility are Volatile Organic Compounds and Hazardous Air Pollutants.

Introduction

On February 23, 1994, Air Permits were issued for the steel joist coating bays at Vulcraft. On January 30, 1997, an Air Permit was issued for the Deck Finishing Operation, which limited this unit to 39 tons per year of volatile organic compounds. On December 14, 1999, Vulcraft submitted a Title V major source permit application for the manufacture and surface coating of steel joist and decking. A Major Source Operating Permit was issued to the facility on January 31, 2002. On September 9, 2015, air permit 703-0017-X004 was issued for seven paint dip tanks. This permit changed the VOC limit from joist painting to 197 TPY, and added a total HAP limit of 24.9 TPY and a 9.9 TPY limit for any single HAP. The HAP limit is for the entire facility, and has been added to the Deck Finishing Operation. On July 29, 2016, the Department received an application to renew the current permit for this facility. Vulcraft is located in Fort Payne. The company manufactures metal joist, and has a Standard Industrial Classification code of 3441, and steel decking under SIC code 3444. Compliance Assurance Monitoring does not apply to this facility because no air pollution control equipment is used. The painting section of the proposed MSOP replaces the separate sections for dip tanks and spray painting in the previous MSOP.

Process

Steel angle and bar are cut and welded to form joist. An overhead hoist is used to lift the joist from the assembly line and dip it into the tank. The joists are then held over the tank to allow excess paint to drip back into the tank, until the joists are placed on a drain rack connected to the tank. When the drain rack is full, an overhead crane takes the joists to a trailer, which carries them out to the storage yard. This is the method of operation used on all paint lines. Some of the dip tanks have been emptied, and are no longer used.

Some of the large joist may be painted with hand held spray guns. Spray guns may also be used to touch up spots on joist which were dipped.

In the deck finishing operation, steel coils are washed, oven dried, painted, oven dried, corrugated, and cut to length.

Emissions

This facility's emissions are from coating solvents, volatile organic compounds, which evaporate after steel joist are dipped in a paint tank, or sprayed with paint. Vulcraft has removed several of the old dip. The dip tanks are divided between five fabrication lines. Under the original permit, six of the tanks, two each from lines one, two, and three have a 245 tons per year (TPY) VOC limit. VOC emissions from the other ten dip tanks were also limited to 245 TPY. Under the previous permit, air emissions from all joist dip and spray coating were limited to 245 tons of volatile organic compounds in any twelve month period. The current permit limits VOC emissions from painting to 197 tons in any twelve month period. Vulcraft request HAP limits to give this facility the flexibility to use other paints. Air emissions from the deck coating line will continue to be limited to 39 tons of VOC in any twelve month period. Vulcraft reported 2005 emissions of 381 tons of VOC from this facility. After switching to a water based paint in 2006, VOC emissions were reduced. This facility reported 32 tons of VOC emissions in 2015. Some of the reduction in VOC emissions is due to decreased production.

In addition to the coating emissions, this facility is estimated to emit less than one ton per year of VOC from natural gas combustion for heat. Fuel burning equipment of less than 0.5 MMBTU/hour capacity is considered trivial. The heaters are in several locations, and are used for warming workers and to speed the drying of painted joist. Three small parts washers also emit VOC. Small quantities of PM, CO, and NOx are emitted from the natural gas combustion, welding, and an emergency generator.

Regulations

The dip tanks are not currently covered by any MACT, NSPS, or NESHAP standards. This facility is not subject to 40 CFR 63 subpart MMMM, the National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products, because it is not a potential major source of hazardous air pollutants. The deck coating line was originally limited to 39 TPY VOC to avoid PSD, and will retain this VOC limit in the proposed permit. The deck coating line is also subject to 40 CFR 60 subpart TT, which limits the coatings to 0.28 kilograms of VOC per liter of coating solids applied. The deck coating line is not subject to 40 CFR 63 subpart SSSS, the National Emission Standards for Metal Coil Surface Coating Operations, because this facility is not a major source of hazardous air pollutants.

Three sources at Vulcraft are subject to area source NESHAPs. The gasoline dispensing facility is required by 40 CFR 63 subpart CCCCCC to keep records of the gallons of gasoline added to the storage tank. The welding is subject to 40 CFR 63 subpart XXXXXX. Vulcraft keeps records of welding wire usage, and of a quarterly visual observation to comply with this federal standard. The emergency electric generator is subject to 40 CFR 63 subpart ZZZZ. Vulcraft keeps records of maintenance and operating hours to comply with this NESHAP.

Monitoring of Emissions

Emissions of VOC and HAP will be determined from material usage. These will be submitted in quarterly reports. This is the current monitoring, and has been sufficient in the past. Records of gasoline throughput and visible emissions observations from welding will also be kept.

Permitting Fees

Title V major sources are subject to operating permit fees which charge the facility a yearly amount based on the actual emission rate of pollutants for the previous year.

Recommendations

I recommend issuing the attached Title V permit. The proposed monitoring is sufficient to demonstrate compliance.

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Hal Brock

Industrial Chemicals Section
Chemical Branch
Air Division

December 9, 2016